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New Brunswick.... an economic profile

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FOREWORD

The New Brunswick Department of Economic Growth welcomes inquiries from interested persons which may be addressed directly to:

THE DEPUTY MINISTER
DEPARTMENT OF ECONOMIC GROWTH
PROVINCE OF NEW BRUNSWICK
FREDERICTON, CANADA

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PREFACE

The preparation of An Economic Profile of New Brunswick was undertaken for the Department of Economic Growth by the Office of the Economic Advisor.

Co-operation of the following departments of the Provincial Government is gratefully acknowledged: Agriculture, Natural Resources and Fisheries.

Acknowledgement is also given Mr. R. B. B. Dickison of the Canada Department of Transport and Mr. Craig Dickson of the Maritimes Transportation Commission for their assistance.

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TOPOGRAPHY

New Brunswick is a roughly rectangular area of 28,354 square miles, bounded on three sides by water — the northeast by Chaleur Bay, the east by the Gulf of St. Lawrence and Northumberland Strait, and the south by the Bay of Fundy and Chignecto Bay. The Province of Quebec and the State of Maine lie to the northwest and west. At the southeast corner, the 13-mile Isthmus of Chignecto forms the boundary with the Province of Nova Scotia.

The topography of New Brunswick is dominated by three main features: — the Chaleur Uplands in the northwest, the New Brunswick Lowland in the east and the New Brunswick Highland in the central and southern portion of the Province. The New Brunswick Highland is further divided into the Miramichi, St. Croix and Caledonia Highlands.

Mount Carleton in the Miramichi Highland rises to 2,690 feet, the highest point in the Province. The highlands are wooded, abound in lakes and streams, and are noted for their fish and game. The St. Croix and Caledonia Highlands, generally lower than those of the Miramichi area, give the southern coastline its rocky, high-cliffed character and unsurpassed scenery.

GENERALIZED GEOLOGY

Precambrian rocks, lying near the Bay of Fundy, comprise two main divisions: — (1) the older, Green Head Group, includes limestone, dolomite, and quartzite; and (2) the younger, Coldbrook Group, consists mainly of volcanic rocks. Deep-seated igneous rocks, intruded into the Green Head and Coldbrook Groups during the Precambrian time, consist of granite, granodiorite, and quartzdiorite.

Sedimentary rocks of Cambrian age occur in Saint John and vicinity. Various types of volcanic and sedimentary rocks of Ordovician, Silurian, and Devonian ages occupy most of the southwestern, western, and northwestern areas of the Province. Mountainous areas occur where resistant igneous rocks predominate. These rocks are not common in the Chaleur Upland and account for the lower elevations and moderate relief. Large batholiths of granite, intruded during the Middle Devonian time, are exposed throughout much of the Miramichi and St. Croix Highlands.

During the Glacial Period, large ice masses overran the entire Province, smoothed the surface and deposited boulders and moraine material.

Most of the known mineral occurrences are concentrated in the highland areas. Many large sulphide bodies have recently been discovered near Bathurst and Newcastle. Lead, zinc, copper, gold and silver are products of the mines operating here. Tin occurs at Mount Pleasant, nickel at St. Stephen, antimony at Lake George, tungsten at Burnt Hill, and manganese near Woodstock. Copper, molybdenum, zinc, lead, gold and uranium occur in the St. Croix and Caledonian Highlands.

The lowland area contains coal seams, which are mined at Minto. Oil and natural gas are produced from the Stoney Creek field near Moncton, and gypsum is mined at Hillsborough. Cement is produced at Havelock, using the nearby limestone in the process. Several manganese deposits are known, and copper was formerly mined near Dorchester. Large quantities of building stone were also obtained from Carboniferous sandstones of this area.

CLIMATE

The climate of New Brunswick is humid continental, with generally adequate precipitation ranging from 32 to 55 inches per year with no pronounced dry season. Fifteen to thirty per cent of the annual precipitation falls as snow, seasonal accumulations ranging from less than 80 inches to over 120 inches. The mean annual temperature for New Brunswick in recent years has ranged from 35° F to 43° F. The principal climatic controls are the distance from the coast and elevation above sea level.

Precipitation is highest along the range of hills near the Bay of Fundy coast, then generally decreases inland. There is a tendency toward winter dryness inland, while Southern New Brunswick, the Bay of Fundy region in particular, exhibits a pronounced winter maximum. Precipitation is lightest along the East Coast and in some of the broader interior valleys; over the Northern Highlands however, increased summer shower activity results in higher values of annual precipitation.

Mean annual temperatures increase from north to south, although the range between winter and summer is noticeably suppressed along the Bay of Fundy coast where summer temperatures are as much as 5° F cooler than inland. Extremes of temperature have ranged from -53° F to 100° F.

CLIMATIC REGIONS:

1. Northern Highlands — This region is heavily forested with few settlements. The general topography is 1,000-2,000 feet with many sharp valleys. Summers are cool and showery; winters are cold, and somewhat drier, but with a high proportion of snow. Precipitation totals 37-44 inches, 20-23 inches during May to September. Average temperatures range from 8° F in January to 64° F in July. Frosts may occur in any month.
2. Northern New Brunswick — This region is generally below 1,000 feet, but far enough removed from coastal influence that precipitation in the summer half of the year is greater than in the winter. Winters are long and cold. Precipitation totals 37-44 inches annually, 17-20 inches during May to September. Temperatures average 14° F in January and 66° F in July with a frost-free season of 80-120 days.
3. Southern New Brunswick — This region is generally lowlands, well settled, and supports a diversified agriculture sector. Winters are milder and wetter than further north, summers are hotter and dryer. Mean annual precipitation decreases from 45 inches along the southern boundary to 39-42 inches further inland, only 15-18 inches of which falls during May to September. Average temperatures range from 17° F in January to 66° F in July, with a frost free season of 120-140 days.
4. East Coast — This region includes the flat coastal areas bordering the Gulf of St. Lawrence and Northumberland Strait. Precipitation totals 32-38 inches annually, 14-16 inches during May to September. Average temperatures range from 16° F in January to 66° F in July, with a frost-free season of 120-140 days.
5. Bay of Fundy — The region is marked by heavier precipitation, particularly during winter, and milder temperatures. Summers however are cool, with frequent intrusions of coastal fog. Mean annual precipitation ranges from 45-55 inches, only 17-20 inches of which occurs during May to September. Average temperatures range from 20° F in January to 62° F in July. The frost free season is 120-160 days.

TOPOGRAPHY AND CLIMATE

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GOVERNMENT

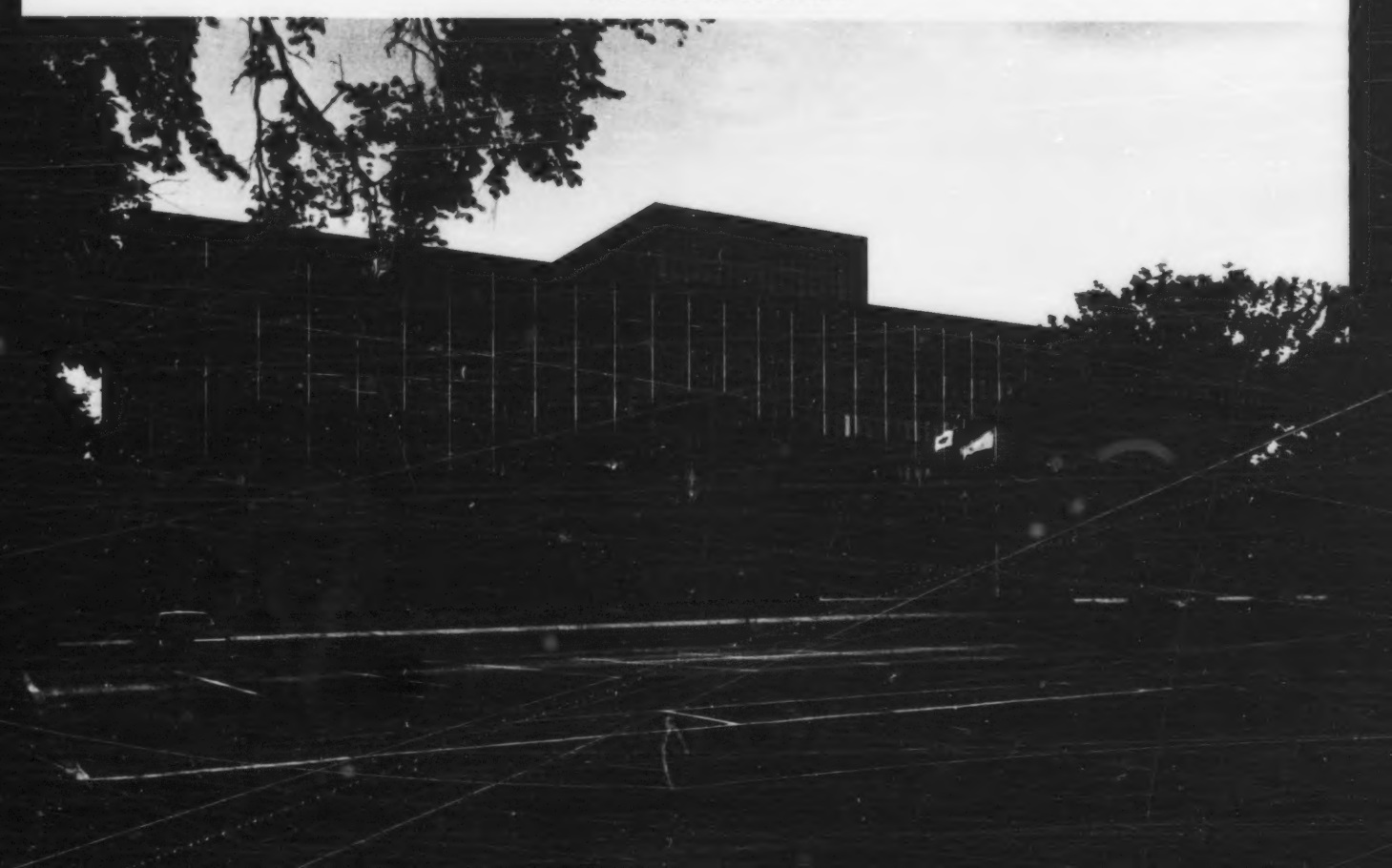
Canada is the world's second largest nation, surpassed in area only by the Soviet Union. It is an autonomous state within the British Commonwealth of Nations. The British Monarch is the nominal head of state and is represented by a resident Governor-General. Canada is a completely self governing federation of ten provinces and two territories.

The Federal Government, as provided in the British North American Act of 1867, consists of the Queen, the Senate and the House of Commons, which together are known as the Parliament of Canada. The party with the largest number of seats in the House of Commons forms the Government with a Prime Minister and his Cabinet.

The provinces are semi-autonomous regions (each with its own legislature) within the federation. The provinces are assigned jurisdiction over education, municipal institutions, property and civil rights, natural resources and other matters of purely provincial or local concern. The Federal Parliament has jurisdiction over all matters not assigned exclusively to the provincial legislatures, including, justice, the public debt and property, the regulation of trade and commerce, currency and coinage, banks and banking, military defence, international affairs, the postal service and navigation.

The executive power in the Province of New Brunswick is vested in the Lieutenant-Governor acting on the advice of the Executive Council. The Executive Council is responsible to the Legislative Assembly. The Lieutenant-Governor, who is the representative of the Queen, is appointed by the Governor-General of Canada in Council. Members of the Executive Council are appointed from members of the Legislative Assembly by the Lieutenant-Governor on the nomination of the Premier.

Pictured below, the Centennial Building, housing the offices of the New Brunswick Government.



TAXATION

Since the end of the Second World War, the sharing of taxes between Federal and Provincial Governments has been governed by a series of five year agreements. Under the present agreement, the Federal Government agrees to collect income taxes on individuals and corporations payable under the Provincial Income Tax Act and to make payments to the Province of the taxes so collected. The new tax agreement provides that the Federal Government will make equalization payments to the Province which are intended to bring Provincial tax yields from all Provincial tax areas up to the level of the average per capita tax yield of all Canadian provinces. Under another section of the Act, the Federal Government guarantees that a province's revenue will not fall below ninety-five per cent of its revenue in the previous year assuming constant tax rates. In the event that it does the Federal Government will make up the difference.

Property and business taxes are wholly provincial responsibilities. The province has the authority to assess lands and buildings at a fair market value and to levy a property tax at $1.50 per $100 of assessed value. The owner-occupier of a business property will be assessed at the rate of $3.00 per $100 assessment. For provincial taxes the rates of assessment and levy are standard throughout the province. Cities and towns have full authority for local services and will impose taxes at a lesser rate than Provincial to maintain these services.

The Province of New Brunswick levies a tax on the income of firms engaged in mining operations, the graduated rates ranging from 7 per cent on profits exceeding $10 thousand to 9 per cent on profits over $5 million. But these, as well as taxes on royalties or stumpage dues in logging operations, are deductable in computing federal income tax.

THE ECONOMY

The early economic history of New Brunswick was marked by rapid growth induced by the insatiable demands for wooden ships and by unrestricted trade with the United States. The adoption of steel and steam to replace wooden ships during the latter part of the nineteenth century marked the beginning of economic decline in the province. This decline was accentuated by the termination of the Reciprocity Treaty with the United States in 1866, and also by the pattern of United States protection which emerged — low duties on raw materials and severe imposts on processed materials — which restricted the degree of processing in New Brunswick. During the early twentieth century the worldwide spread of economic nationalism and the disruption in international trade associated with two world wars generally impinged on the growth of the maritime primary industries; for these have been geared in large part to foreign markets. The end result of these developments was to restrict growth both as to volume of production and as to the value which could be added to the final product by local processing.

In the period since 1961, a startling and progressive contrast in the development of New Brunswick has taken place. The period is significant for improved federal regional economic policy, increased development of the Province's resources and an aggregate of public and private capital investment without precedent. The combination of these forces has enabled the Province to break

away from a lethargic growth rate and to gain the momentum which is changing its dependent population from an extractive to an industrialized society. Although the economy is relatively dependent on natural resource industries, the provincial government has in recent years concentrated on expanding the manufacturing sector which today includes many new industries, among which the manufacture of pulp and paper, frozen foods, chemicals and electronic equipment are the most prominent.

On June 1, 1966 New Brunswick had a population of 617,000 with a total labour force of 204,000. Capital investment in 1967 was $483 million and the total value of production of all goods and services was $1,275 million. Personal income per capita in New Brunswick was $1,658 during 1967.

New Brunswick's rapid growth in the last decade has been accomplished through the industrial development of the primary sector. A considerable portion of this production is exported to foreign markets, making New Brunswick heavily dependent on international trade conditions. By far the largest proportion of New Brunswick exports are absorbed by the United States and Great Britain. The United States has been the major purchaser of fish, pulpwood, and wood products, while Great Britain has been the principal market for paper and paperboard.

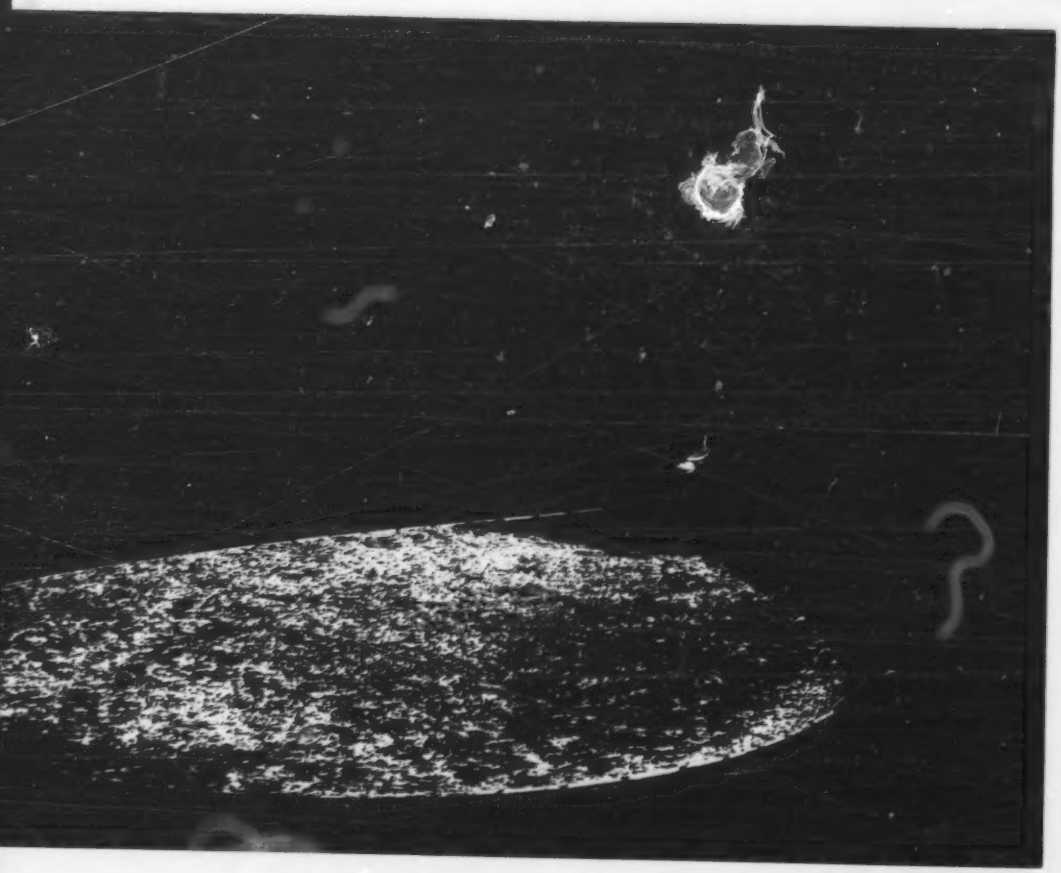
Retail trade establishments are well developed in New Brunswick. Retail trade per capita in the Province is approximately $915 with some urban centres, notably Fredericton, Moncton and Saint John having dollar per capita sales well above that of larger Canadian cities.

New Brunswick can be divided into four broad regions. The North-east region has historically been dependent on fishing and primary forest activity. Population settlements are generally within 20 miles of the coast. Mineral deposits are being extensively developed and will provide an impetus for future growth. There are a number of seaports in this region which are capable of handling ocean-going vessels. Wood products, food and mineral processing and chemicals are major industrial activities in the region.

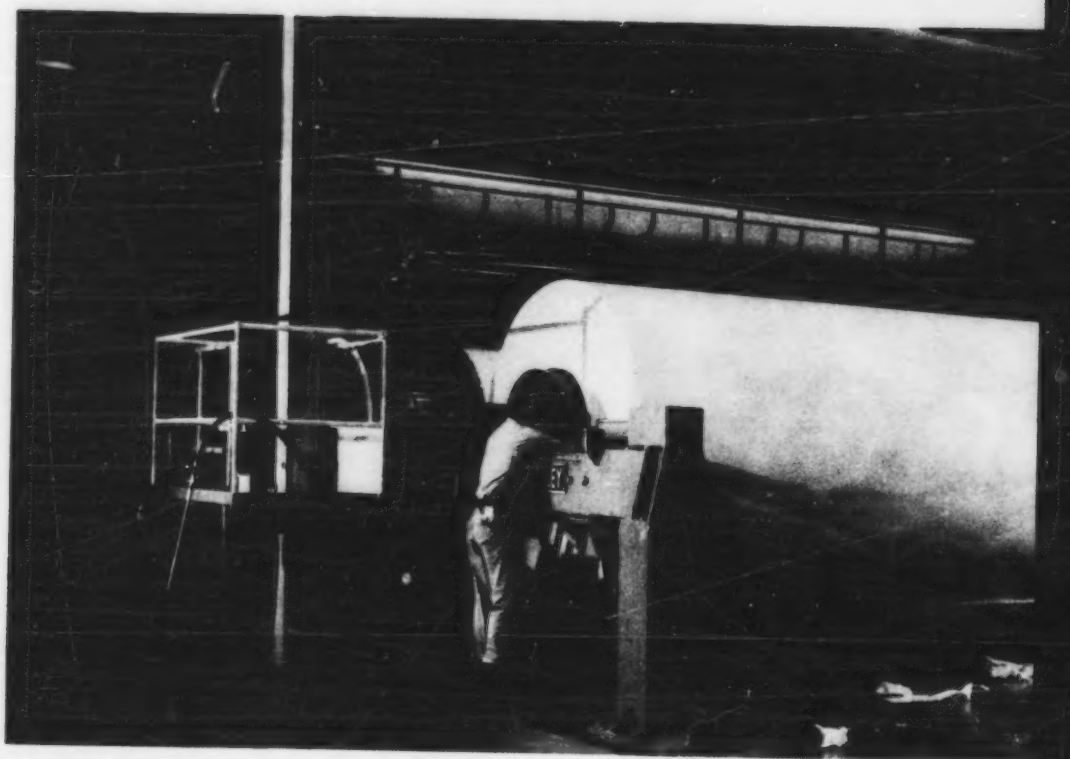
The South-east region of the Province revolves around metropolitan Moncton, the hub of the maritime transportation system. Industries here are mainly service oriented, the city being the natural centre for much of the employment, shopping, service, cultural and communication activities of the region's population.

The South-west region of the Province is the most densely populated, containing the large seaport of Saint John and the Province's capital, Fredericton. These two cities are the service centres for a large proportion of the Province's population. In addition to a year round seaport this region also has two airports which provide regular passenger and cargo service.

The North-west region of the Province consists of three counties which are economically linked by the St. John River, the Trans-Canada Highway, the potato industry and forest activities. There is no single service centre for the region and there is a limited amount of commercial intercourse among the counties in the region.



At left, pulpwood being towed to the mill at Saint John



At right, the world's largest paper machine in operation in one of New Brunswick's modern paper mills

POPULATION

On June 1, 1966 New Brunswick had a population of 617,000 in a nation of 20,000,000. The principle ethnic groups within the Province are English, Irish, Scottish and French. Approximately 60 per cent of the population is English speaking, 20 per cent French speaking and 20 per cent are bilingual.

Population of the Counties, 1966

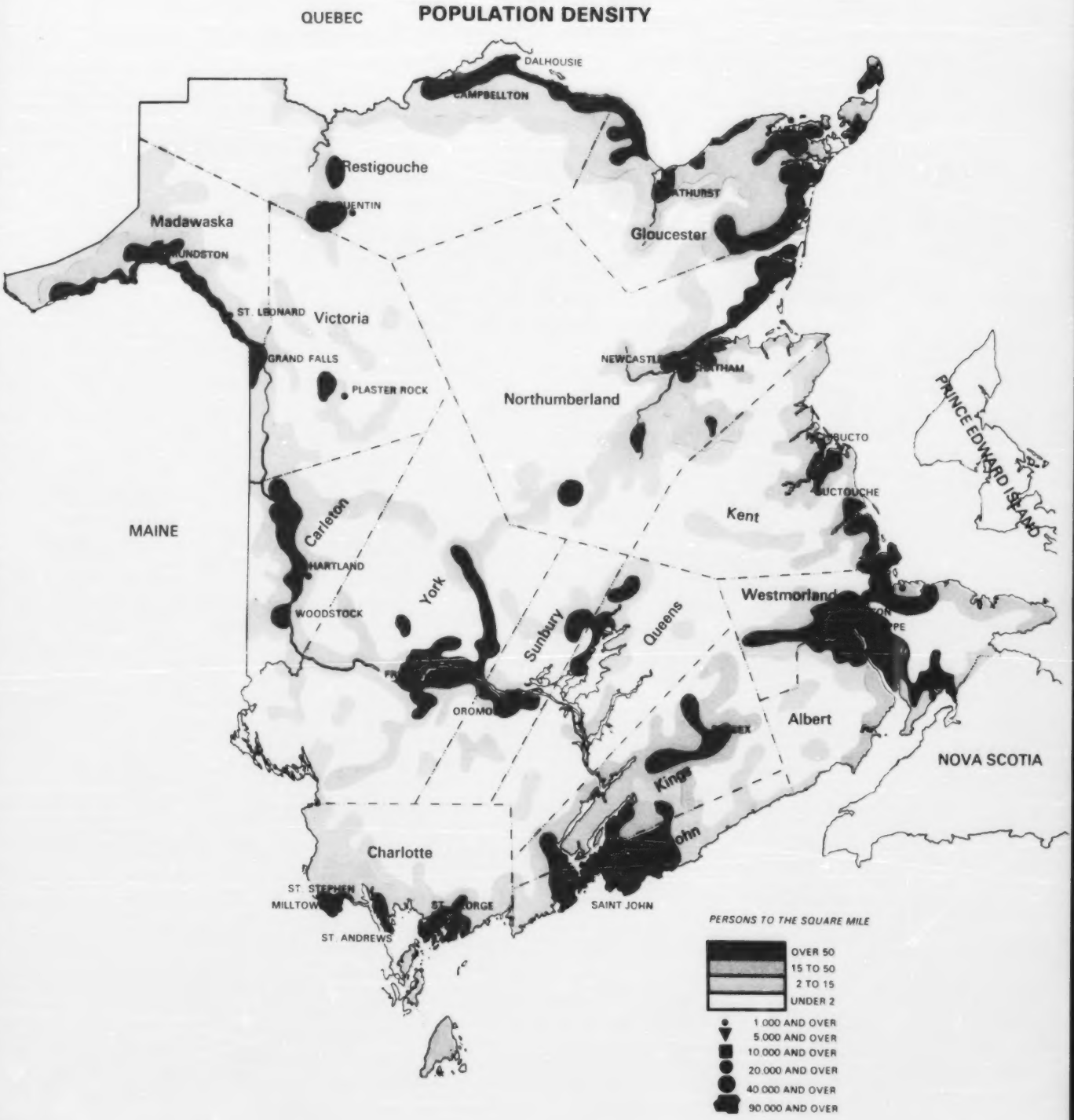
Albert	13,944	Queen's	10,940
Carleton	23,356	Restigouche	41,121
Charlotte	23,543	St. John	92,926
Gloucester	70,301	Sunbury	25,011
Kent	24,736	Victoria	19,694
Kings	28,548	Westmorland	95,181
Madawaska	37,306	York	58,470
Northumberland	51,711		

Population of Selected Cities, Towns, and Villages, 1966

Atholville	291	Petit Rocher	1,329
Bathurst	18,256	Petitcodiac	1,436
Buctouche	1,832	Plaster Rock	1,430
Caraquet	3,047	Richibucto	1,668
Campbellton	15,586	Saint John	101,192
Chatham	8,136	Saint Andrews	1,719
Dalhousie	6,107	Saint George	1,104
Dieppe	3,847	Saint Stephen	3,285
Edmundston	17,856	Saint Leonard	1,635
Fredericton	38,521	Saint Quentin	1,791
Grand Falls	4,158	Sackville	3,186
Hartland	1,034	Shediac	2,134
Kedgewick	1,054	Shippegan	1,741
Milltown	1,952	Sussex	3,607
Moncton	69,511	Tracadie	2,018
Newcastle	5,911	Woodstock	4,442
Oromocto	18,348		

Population by Age Groups and Sex, 1966

Age Group	Total	Male	Female
0 — 14	222,062	113,675	108,387
15 — 24	107,898	54,598	53,300
25 — 34	65,198	32,477	32,721
35 — 44	66,697	32,992	33,705
45 — 54	60,595	30,532	30,063
55 — 69	60,643	30,263	30,380
70 +	33,695	15,608	18,087
TOTAL	616,788	310,145	306,643


QUEBEC
POPULATION DENSITY
DALHOUSIE
CAMPBELLTON
Restigouche
Madawaska
Gloucester
Victoria
ST. LEONARD
GRAND FALLS
PLASTER ROCK
Northumberland
NEWCASTLE
CHATHAM
PRINCE EDWARD ISLAND
MAINE
Carleton
HARTLAND
WOODSTOCK
York
Sunbury
Queens
Kent
Westmorland
Albert
NOVA SCOTIA
Kings
Charlotte
ST. STEPHEN
ST. ANDREWS
SAINT JOHN
PERSONS TO THE SQUARE MILE
OVER 50
15 TO 50
2 TO 15
UNDER 2
1,000 AND OVER
5,000 AND OVER
10,000 AND OVER
20,000 AND OVER
40,000 AND OVER
90,000 AND OVER

MANUFACTURING

The manufacturing industries of New Brunswick make a very substantial contribution to the Provincial economy. While primary industry has to date received the greater part of private capital invested in the Province, the full effect of recent expansion among manufacturing industries has yet to be felt. It is to this sector that the agencies of government are being strenuously applied in an effort to balance Provincial development by filling the gap between resource based and service industries. Capital expenditures in manufacturing has doubled since 1960, reaching a total of $58 million in 1967. The value of manufacturing shipments has shown similar rapid gains, reaching a total of $551 million in the same year.

Manufacturing Shipments, 1962-67

Year	1962	1963	1964	1965	1966	1967
— $ millions —	401	456	494	514	538	551

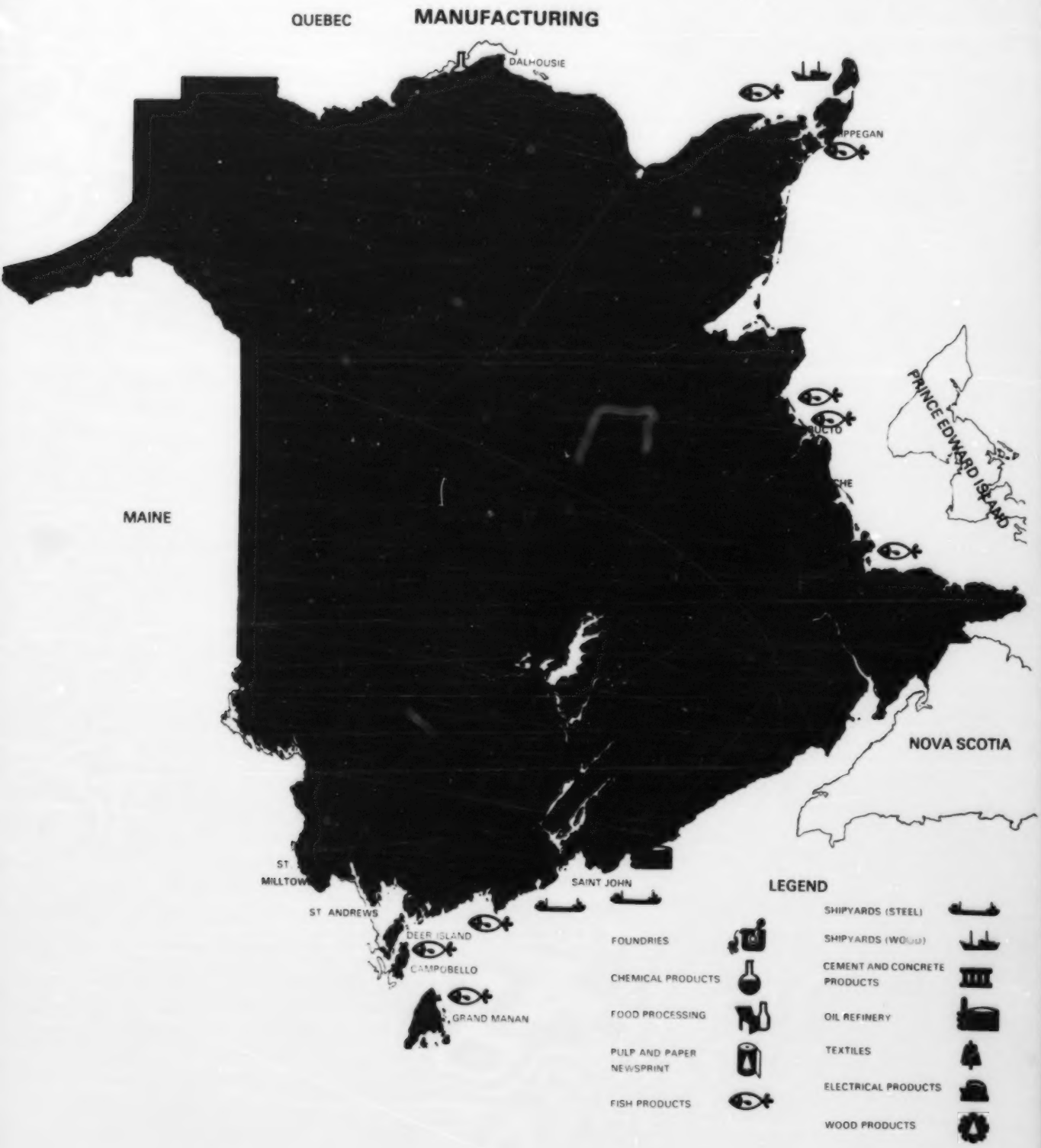
About one-third of New Brunswick's manufactured production comes from the output of forests and of this amount three-quarters is manufactured as pulp and paper products. Diversified manufacturing makes up the other two-thirds and includes such categories as foods, shipbuilding, oil refining, fish products, electrical products and textiles.

The development of industrial parks is part of the Province's campaign for increased secondary activity. The industrial parks of which there are now seven combine the best of the Province's power, transportation and geographic facilities with generous financial assistance. The largest parks are located in the Moncton area but others of ample size are located at Saint John, Fredericton, Woodstock and Sussex.

There are numerous government services available to industries wishing to locate, or already located in the Province. The New Brunswick Development Corporation is the Crown agency established by the Provincial Government to develop existing or introduce new industry to the Province and provides a wide range of professional development services as well as making funds available to help finance the capital assets of industry.

The Federal Government through its agencies, the Area Development Agency and the Atlantic Development Board, offer generous incentives and assistance to industry expanding or locating in New Brunswick. Financial assistance takes the form of outright grants and accelerated depreciation rates. The investment costs to which the grants will apply are new buildings, equipment and machinery, and company expenditures for facilities such as water supply, sewage disposal, electric power, and wharves and docks which are company owned. Accelerated depreciation rates apply on new machinery and equipment and on new buildings and significant extensions to existing buildings.

The New Brunswick Research and Productivity Council is established to promote, stimulate and expedite continuing improvement in productive efficiency and expansion in various sectors of the New Brunswick economy. The Council provides scientific, engineering and technical staff, laboratory and workshop facilities in the three broad areas of industrial services, industrial research and natural resources research. All these services are readily available to any industry upon application. The Provincial Departments of Labour and Education offer a variety of retraining and upgrading programs. This program allows industry to locate in areas where there is a surplus of manpower that merely requires revised training.


QUEBEC
MANUFACTURING
DALHOUSIE
PPEGAN
PRINCE EDWARD ISLAND
MAINE
NOVA SCOTIA
ST
MILLTOW
ST ANDREWS
SAINT JOHN
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
FOUNDRIES
CHEMICAL PRODUCTS
FOOD PROCESSING
PULP AND PAPER
NEWSPRINT
FISH PRODUCTS
SHIPYARDS (STEEL)
SHIPYARDS (WOOD)
CEMENT AND CONCRETE
PRODUCTS
OIL REFINERY
TEXTILES
ELECTRICAL PRODUCTS
WOOD PRODUCTS

+15

FOREST RESOURCES

The forests of New Brunswick have a number of natural and other advantages that tend to provide opportunity for economic timber harvesting at comparatively short rotation periods: firstly, there are favourable ratios of sawlogs to pulpwood with 36 per cent of all hardwoods sawlog-size; secondly, mechanical harvesting methods allow for "clear-cutting" operations in mature stands; thirdly, an increasing network of all-weather forest roads makes all parts of the Province accessible for lumbering operations and lastly, there are rapid growth rates in most areas in the north of the Province and along the Fundy Coast.

The New Brunswick Forest Inventory estimates the total productive forest land of the Province to be 15.3 million acres with a potential annual growth of 380 million cubic feet. The productive forest land represents 85 per cent of the total Provincial land area, making New Brunswick one of the most highly forested regions in the world, more than any other part of Canada. This productive forest land is divided into the following ownership categories: Crown Land (48 per cent), large Freehold Properties (23 per cent) and Small Freehold Properties (29 per cent).

The kind of timber in New Brunswick may be adequately described as softwood or hardwood. The softwoods are mainly spruce and balsam fir. These species form New Brunswick's most valuable stands and make up 65 per cent of the total volume of timber in the Province. Hardwoods, half of which are maple, comprise 35 per cent of the total volume of timber.

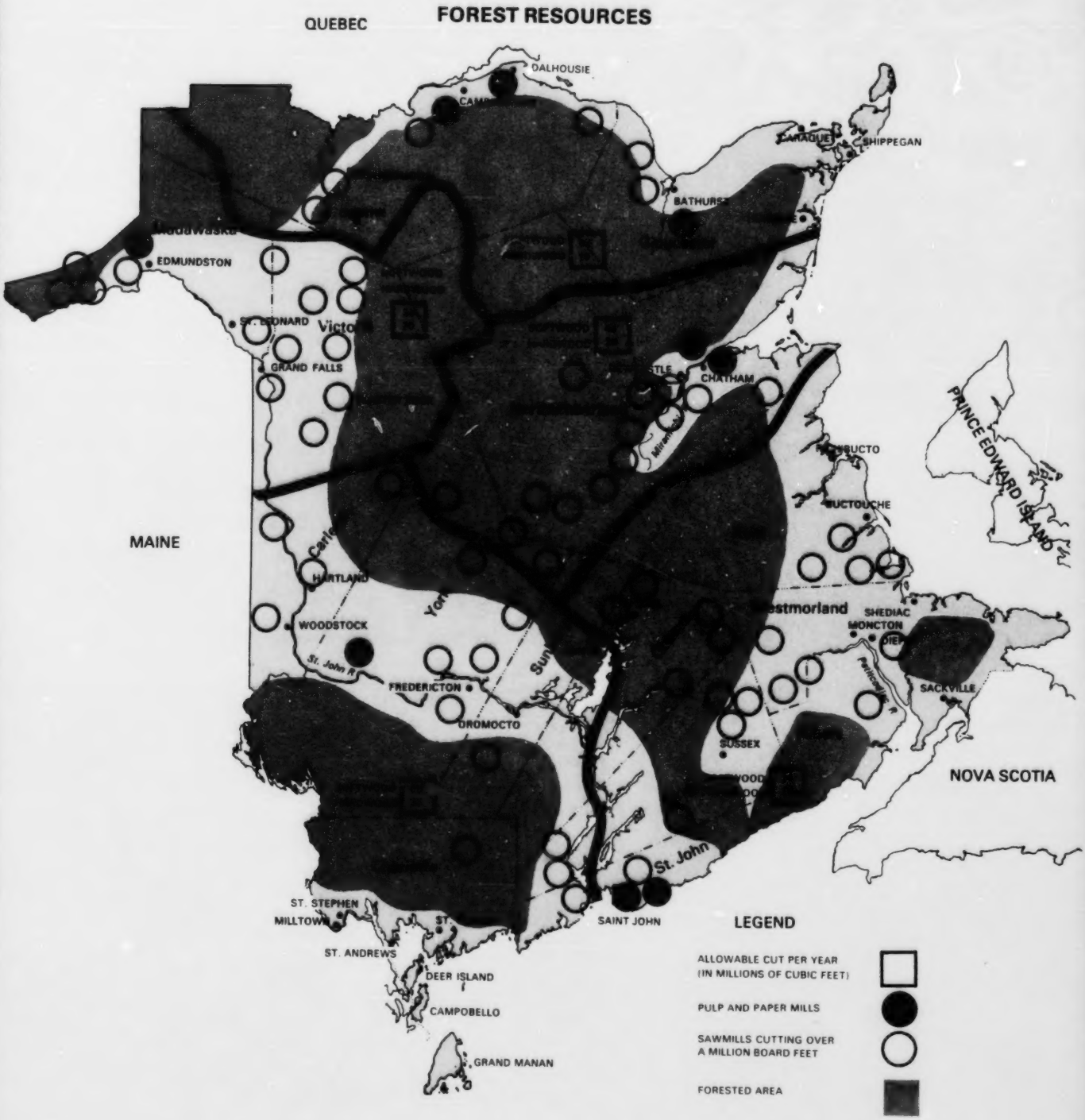
The best forests, and the industries associated with them, are found west of the Saint John River and north of the Miramichi River, but smaller areas of good forest lands in the southeastern portion of the Province support a number of modern sawmills.

The Provincial Department of Natural Resources regulates all cutting on Crown Lands (7,000,000 acres) and is responsible for all phases of forest management of these lands. Control of fires, insects and diseases on privately owned forested lands (8,000,000 acres) is usually carried out through agreement and cooperation between the Provincial and Federal governments and the land owners.

FOREST PRODUCTION

The following table sets forth estimates of the average annual primary forest production for the years 1963-1967 in New Brunswick.

	Sawlogs and Veneer logs (thousand board feet)	Pulpwood (rough cords)	Fuelwood (cords, 80 cu. ft.)	Other (cords)
Softwood	255,000	1,341,000	30,800	1,400
Hardwood	42,000	51,000	125,000	—
Veneer	3,700	—	—	—
Total	300,700	1,392,000	155,800	1,400


FOREST RESOURCES
QUEBEC
DALHOUSIE
SHIPPEGAN
BATHURST
EDMUNDSTON
GRAND FALLS
CHATHAM
PRINCE EDWARD ISLAND
BUCTOUCHE
MAINE
HARTLAND
WOODSTOCK
St. John R.
FREDERICTON
DROMOCTO
SUSSEX
SHEDIAC
MONCTON
SACKVILLE
NOVA SCOTIA
St. John
SAINT JOHN
ST. STEPHEN
MILLTOWN
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
ALLOWABLE CUT PER YEAR
(IN MILLIONS OF CUBIC FEET)
PULP AND PAPER MILLS
SAWMILLS CUTTING OVER
A MILLION BOARD FEET
FORESTED AREA

+10

Pictured at left, a base metal smelter located in Northeast New Brunswick

A pulp mill such as the one shown at right, is part of New Brunswick's important pulp and paper industry

COMMERCIAL FISHING

New Brunswick's commercial fishing has played an important role in the history of the Province. Together with agriculture and lumbering, it has been among the most important of the Province's industries since the arrival of the first settlers.

The abundance of cod and lobsters on the northern and eastern shores and the sardines or young herring in the Bay of Fundy has particularly encouraged the development of fish processing.

The industry has grown considerably since its early conception, especially during the last twenty years. The traditional hand-line cod fishing was converted to more modern methods of otter trawling, scottish seinenetting and gillnetting, while the dry salt cod industry was being converted to fresh and frozen fillets. The canned lobster has largely been replaced by firms selling live and frozen lobsters. The sardine industry has long since developed into the largest sardine canning industry in the world. In the past few years larger quantities of herring are being utilized for reduction into fish meal and oil.

While the Province's fisheries have been greatly diversified and more species of fish and other marine products are being exploited, lobster is still the most valuable species, followed by herring and cod.

In 1967 the fishing industry employed 5,800 persons and the total value of the fish catch was $10.6 million.

The export market absorbs about 90 per cent of the fisheries production. While the U.S.A. constitutes the largest export market, fish products are exported to the Caribbean, the European countries and as far afield as Australia and New Zealand.

Volume and Value of Fish Landings
in New Brunswick, 1967

	Volume ('000 lbs.)	Value ('000 dollars)
Lobster	5,167	3,330
Oysters	527	84
Clams	1,358	99
Scallops	175	102
Other molluscs and crustaceans	1,321	128
Cod	22,380	981
Haddock	4,680	286
Redfish	28,972	752
Flatfish	15,427	465
Other groundfish	4,673	142
Herring	257,695	3,066
Salmon	1,437	856
Smelts	2,128	170
Other pelagic and estuarial	6,289	152
TOTAL	352,230	10,612

AGRICULTURE

The agricultural industry in New Brunswick has undergone considerable adjustment during recent decades. Much of this change has been the result of a great influx of new farming technology and the insertion of more private and social capital through private investment, loans, and subsidies. New methods of transportation have opened up additional potential markets for products. At the same time, there has been a considerable shifting of resources out of agriculture as alternate uses for land and labour have developed.

The total farming area in the Province is confined to slightly less than 2,000,000 acres or about 10 per cent of the total land area. However, in terms of improved farmland, only about 638,000 acres are involved, representing about 3.5 per cent of the total land area. For the most part, commercial agriculture is located along the Upper and Lower Saint John River Valley, and in certain areas of southeastern New Brunswick.

The trend in New Brunswick has been towards fewer and larger farms. In 1966 there were 8,706 farms in the Province with an average size of 208 acres per farm. Although the number of farms declined by 3,000 over the five year period from 1961 to 1966, the average size increased from 187 to 208 acres.

The major adjustment in numbers and areas of farms has taken place within the non-commercial farming sector. About one-third of the total farms can be classed as commercial and these utilize about one-half of the total farming area of the Province. In 1961 the average size of commercial farms was 280 acres; by 1966 this had increased to 305 acres. Although acreage per farm has increased, total improved acreage decreased by some 95,000 acres or 13 per cent during this five year period.

The most common type of farms are the dairy farms which are concentrated in the central and southeastern sections of the Province. About 33 per cent of all the commercial farms in the Province are of this type.

In terms of total farm cash receipts, the potato farms are the largest contributors. These farms are concentrated mainly in the Upper Saint John River Valley and account for about 25 to 30 percent of all new Brunswick's commercial farms.

Livestock enterprises such as beef, hogs, and sheep are fairly prevalent and, together with poultry, represent about 20 per cent of all the commercial farms. Other types of farms are the mixed combinations, fruits and vegetables, and forestry. These together represent less than 20 per cent of all the commercial farms in the Province.

Of a total Provincial labour force of 204,000 approximately 6 per cent or 12,000 are employed in agriculture.

The following table sets forth the average of farm cash income for the 1964-66 period.

Major Components
('000 dollars)

Potatoes	19,200	Poultry	2,400
Fruits	1,700	Eggs	3,800
Vegetables	1,100	Other livestock products	500
Other crops	1,400	Forest Products	1,400
Livestock	10,600	Other	600
Dairy Products	11,400		
Total Farm Cash Income — $54,100			

AGRICULTURE AND FISHING
QUEBEC
MAINE
NOVA SCOTIA
PRINCE EDWARD ISLAND
DALHOUSIE
CAMPBELLTON
Restigouche
Madawaska
ST. QUENTIN
EDMUNDSTON
ST. LEONARD
Victoria
GRAND FALLS
PLASTER ROCK
Carleton
HARTLAND
WOODSTOCK
St. John R.
York
FREDERICTON
OROMOCTO
Sunbury
CHIPMAN
MINTO
Queens
Kings
Charlotte
ST. STEPHEN
MILLTOWN
ST. GEORGE
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
SAINT JOHN
St. John
BATHURST
Gloucester
TRACADIE
NEWCASTLE
CHATHAM
Northumberland
Miramichi R.
RICHIBUCTO
BUCTOUCHE
Kent
Westmorland
SHEDIAC
MONCTON
DIEPPE
Petitcodiac R.
SACKVILLE
Albert
SUSSEX
HALIBUT
LOBSTER
CARAQUET
SHIPPEGAN
TOMCOD
OCEAN PERCH
FLOUNDERS
HADDOCK
MUSSELS
QUAHAUGS
OYSTERS
SCALLOPS
SMELTS
SALMON
LOBSTER
IRISH MOSS
EELS
CATFISH
ALEWIVES
SHAD
LOBSTER
MACKEREL
SALMON
HERRING
DULSE
POLLOCK
HAKE
CATFISH
LEGEND
HEAVILY FORESTED AREAS
LIGHTLY FORESTED AREAS
GENERAL FARMING AREAS
POTATO FARMING AREAS
DAIRY FARMING AREAS
FISH PROCESSING AREAS

+8

MINING

The discovery of large base metal deposits in Northern New Brunswick in 1953 set off a fever of exploration resulting in the discovery of twenty-three sulphide deposits of which ten may be developed into mines. After the success of electro-magnetic techniques in the northern region, the industry is looking optimistically to the re-exploration of the central and southeast regions, where early surveys lacked the precision of the modern approach.

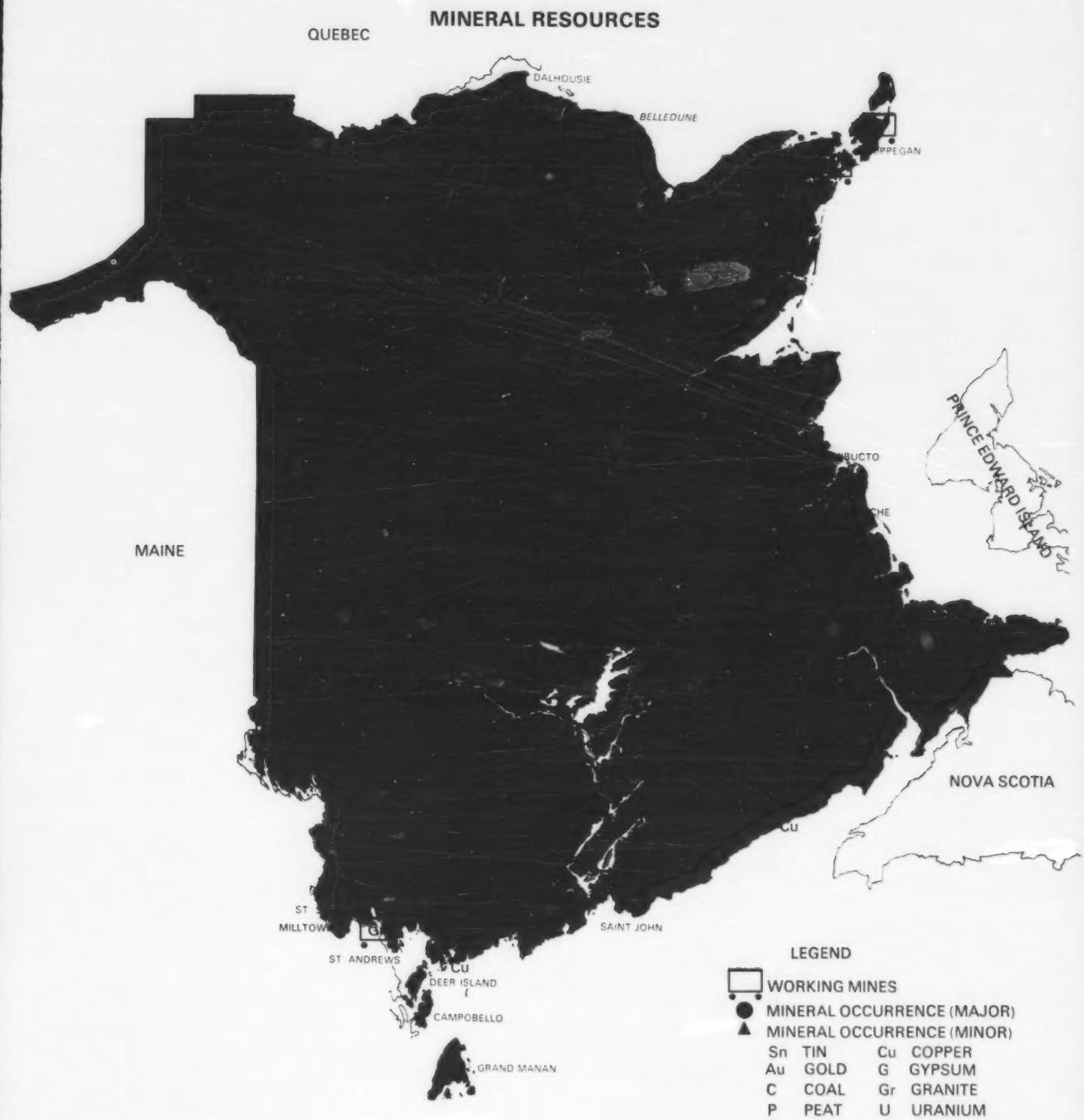
The gross value of mineral production in 1967 was approximately $92 million, of which metals contributed about $70 million. Production in the 1961-1967 period rose from $18 million to the present level. The principal metallics are lead, zinc, silver and copper.

Metal mines in production are: Brunswick Mining and Smelting Corporation at 7,200 tons per day; Heath Steele Mines at 750 tons per day; Cominco Wedge Mine at 750 tons per day; and Nigadoo River Mines at 1,000 tons per day. Concentrates are shipped to various points in Canada, the United States, Europe and Japan. Bulk concentrates from Brunswick Mining and Smelting are processed at East Coast Smelting and Chemical Company, Belledune, where a new smelter employing the Imperial Smelting Process has recently been constructed.

A small amount of oil and natural gas is produced from the Stoney Creek field near Moncton. Gypsum is quarried at Hillsborough, and plaster and wallboard are manufactured at a plant operated by the Canadian Gypsum Company. The peat moss industry is centered in the northeastern portion of the Province. The industry has had a rapid expansion over the past few years. The bogs are operated by hand-cutting and mechanized methods. Several limestone quarries operate for the production of agricultural lime, chicken grit and terrazo chips. Granite is quarried in Charlotte, Queens, and Gloucester Counties for monuments and building purposes.

Estimated Value of Mineral Production in New Brunswick, 1967

Metals	$	Fuels	$
Zinc	44,815,380	Coal	7,463,415
Lead	14,087,818	Natural Gas	87,814
Copper	5,833,669	Petroleum, crude	25,626
Silver	5,146,190	Total Fuels	7,576,855
Cadmium	151,244		
Gold	41,185	Structural Materials	$
Total Metals	70,075,486	Sand and Gravel	4,450,000
Non-Metallics	$	Cement	4,042,648
Peat Moss	1,542,700	Stone	3,222,818
Sulphur, in smelter gas	310,505	Clay Products	568,991
Gypsum	244,990	Lime	79,420
Grindstone	3,000	Total Structural Materials	12,363,877
Total Non-Metallics	2,101,195		
GRAND TOTAL 1967	$92,117,413		


MINERAL RESOURCES
QUEBEC
DALHOUSIE
BELLEDUNE
MAINE
PRINCE EDWARD ISLAND
NOVA SCOTIA
SAINT JOHN
ST ANDREWS
Cu
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
WORKING MINES
MINERAL OCCURRENCE (MAJOR)
MINERAL OCCURRENCE (MINOR)
Sn TIN
Cu COPPER
Au GOLD
G GYPSUM
C COAL
Gr GRANITE
P PEAT
U URANIUM
Pb LEAD
W TUNGSTEN
S SALT
Ni NICKEL
Zn ZINC
Ls LIMESTONE
Ag SILVER
Mn MANGANESE
Co COBALT
Mo MOLYBDENUM
O PETROLEUM, NATURAL GAS

+2

UTILITIES

Electric Energy

Seven steam and six hydro-electric plants of the New Brunswick Electric Power Commission generate and deliver ample electric power for all present needs with capacity to meet the requirements of future industrial growth.

The largest hydro-electric plant in the Province, the Mactaquac Development, commenced production from three of its six 100,000 Kilowatt units during 1968. Additional units will come into service as required. The Mactaquac Development, when fully operational, will enable the Commission to double its present productive capacity to approximately 1.2 million Kilowats.

The Industrial Power Rate Schedules of the Commission are divided into four classes based on size of load. Class I is applicable to industrial customers contracting for up to 750 Kw. Class II is applicable to industrial customers contracting for 750 Kw. to 5,000 Kw. Class III is applicable to industrial customers contracting for 5,000 Kw. to 15,000 Kw. Class IV is applicable to industrial customers contracting in excess of 15,000 Kw.

Water Resources

Water Resources are abundant and supply exceeds consumption by more than one hundred fold. In a few areas, treatment for pollution, colour or torpidity is required but in most locations the quality of the water is excellent. Many localities have ground water which is suitable in both quality and quantity for cooling purposes.

Telephone Services

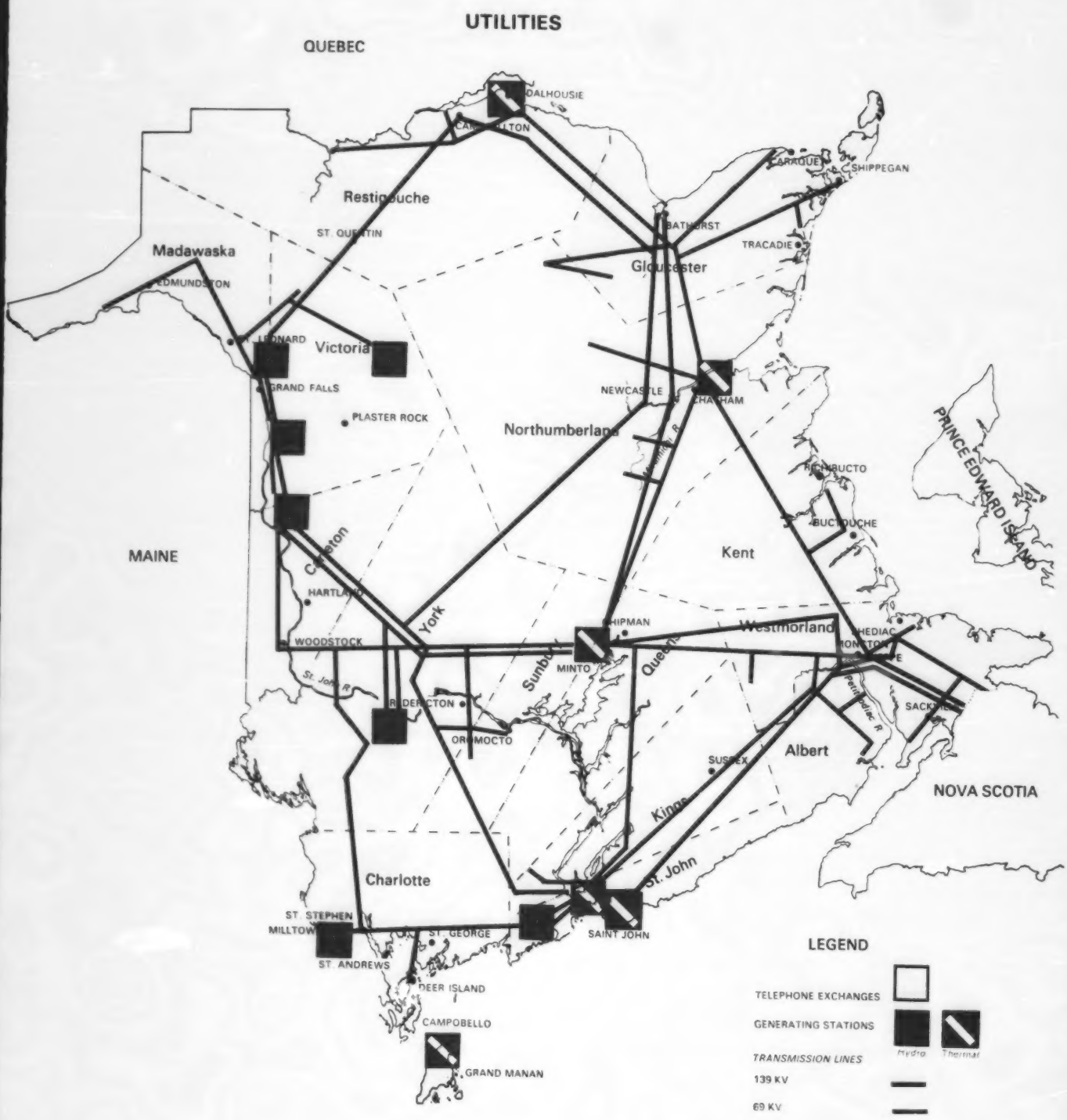
The New Brunswick Telephone Company is one of the eight members of the Trans-Canada Telephone System working together as partners in a nationwide business. They provide a complete network capable of carrying a diversity of commununications — namely, television and radio programs, data and defence communications, as well as regular telephone traffic.

A major portion of the Company's operations is directed at supplying complete telecommunication services to business and industry. These services include automatic and manual switchboard systems for larger firms requiring flexible telephone service; industrial television; customized paging and alarm systems; and public mobile telephone service providing efficient two-way radio-telephone communications.

The Company also offers complete service in message and data transmission. TWX, a dial-and-type service with connections to most locations throughout the world and private teletype systems permitting the typing of messages to predetermined locations, are two more of the Company's service offerings.

The Company's Data Communication Services provide for fast and economical transmission of data up to speeds of 1,500 words per minute. A high speed system for sending and receiving data in punch-tape form is also available. This system is capable of transmitting data information to any location in the world regardless of the level of contents of tape. Another offering is Data-Phone, a service which permits the transmission of information media such as cards, tape or voice at varying speeds over the regular telephone network.

In addition to specialized equipment, the Company offers many other services such as Wide Area Telephone Service, Foreign Exchange Service, Direct Line Service and Special Reverse Change Service (Zenith).


UTILITIES
QUEBEC
DALHOUSIE
CAMPBELLTON
CARAQUET
SHIPPEGAN
Restigouche
ST. QUENTIN
BATHURST
TRACADIE
Madawaska
EDMUNDSTON
Gloucester
LEONARD
Victoria
GRAND FALLS
NEWCASTLE
CHATHAM
PLASTER ROCK
Northumberland
Miramichi R.
RICHIBUCTO
PRINCE EDWARD ISLAND
BUCTOUCHE
MAINE
Carleton
Kent
HARTLAND
York
SHIPMAN
Westmorland
SHEDIAC
MONCTON
WOODSTOCK
Sunbury
MINTO
Queens
St. John R.
Petitcodiac R.
RIDGETOWN
SACKVILLE
ORMOCTO
SUSSEX
Albert
NOVA SCOTIA
Kings
St. John
Charlotte
ST. STEPHEN
MILLTOWN
ST. GEORGE
SAINT JOHN
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
TELEPHONE EXCHANGES
GENERATING STATIONS
Hydro
Thermal
TRANSMISSION LINES
139 KV
69 KV

TRANSPORTATION

Railways

For the past several years, more than 4½ million tons of revenue freight have been loaded annually into railway cars along New Brunswick's 1,700 miles of track. Close to 50 per cent of this tonnage was in manufactured and miscellaneous goods, while products of mines accounted for better than 25 per cent. This tonnage was carried by two railways, Canadian National and Canadian Pacific. Shipment by rail freight service within the Atlantic Provinces and from points in the Atlantic Provinces to points outside the Atlantic Provinces elsewhere in Canada enjoy the benefits of the Maritime Freight Rates Act — a federal statute which provides a subsidy to the railways in return for lower rates. The Act provides a subsidy of 20 per cent on shipments within the Atlantic Provinces and, since 1957, 30 per cent on the portion of the freight charges earned within the subsidized territory on shipments moved to other parts of Canada.

Trucking

There are approximately 1,300 miles of arterial highways (including 380 miles of Trans-Canada Highway) and 1,100 miles of collector highways in New Brunswick. Of the four Atlantic Provinces, New Brunswick has the least stringent weight restrictions for highway transports during the spring months. On the Trans-Canada Highway as well as other highways of similar construction, 90 per cent of the transport units registered weight is allowed; on most other main highways spring weight restrictions of 75 per cent of normal weight limits are imposed.

Shipping

Cargo tonnage loaded and unloaded at New Brunswick ports tops the 5½ million mark yearly. The ice-free port of Saint John, which handles more than 75 per cent of the traffic, is in operation year round and provides excellent facilities for service to and from seaports all over the world. Among those facilities are three grain elevators, extensive berthing accommodations and one of the largest ship graving docks in the world. The port is well serviced by railway and highway and has both heated and unheated sheds available for handling and storage of traffic using the port. A cold storage plant is also available at the port of Saint John. A new port is being developed at Belledune to handle traffic from the growing mineral development of Northern New Brunswick.

Airlines

By air, New Brunswick is only a few hours from Montreal, Toronto, Boston and New York. Licensed airports are to be found at Fredericton, Moncton, Saint John, Grand Falls, St. Stephen, Bathurst and Woodstock. Air Canada provides direct freight and passenger service in New Brunswick to Moncton, Saint John and Fredericton. It links New Brunswick directly to Toronto, Montreal, Halifax, St. John's, Boston and Yarmouth. In addition, there are a number of charter services licensed to operate within the Province.

Ferries

New Brunswick's geographical status as the gateway to the Atlantic Provinces is further enchanced when it is viewed from a ferry service standpoint. Through various services, the Province is directly linked to Quebec, Prince Edward Island and Nova Scotia. Daily ferry services are offered from Cape Tormentine, N. B. to Borden, P. E. I. and from Saint John, N. B. to Digby, N. S.

TRANSPORTATION FACILITIES
QUEBEC
DALHOUSIE
CAMPBELLTON
SHIPPEGAN
Restigouche
ST. QUENTIN
Madawaska
BATHURST
TRACADIE
Gloucester
ST. LEONARD
Victoria
GRAND FALLS
PLASTER ROCK
NEWCASTLE
CHATHAM
Northumberland
Miramichi
PRINCE EDWARD ISLAND
MAINE
Kent
HARTLAND
WOODSTOCK
Westmorland
Sunbury
Queens
St. John R.
FREDERICTON
Albert
NOVA SCOTIA
Kings
St. John
Charlotte
MILLTOWN
SAINT JOHN
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
HARD SURFACE ROADS
RAILROAD
FERRY
AIRPORT
HARBOUR

RECREATIONAL RESOURCES

Every year upwards of one million visitors come to New Brunswick to camp, swim, water-ski, fish, hunt or just to relax in a natural setting.

Three-quarters of the Province or about fifteen million acres is a rolling green carpet of tree covered upland, broken only by jewel-like lakes, sparkling streams, and bald peaks. A panoramic view formed by the combination of farmstead, forest, and often the sea has earned New Brunswick the label, "The Picture Province". Tides up to 50 feet in height on the Bay of Fundy are responsible for such natural wonders as the Reversing Falls, the Hopewell Rocks, and the Tidal Bore.

To challenge the sports fishermen, the Province offers the Atlantic Silver Salmon of the Miramichi and many other rivers. Inland waters support good stocks of sizeable landlocked salmon, speckled trout, lake trout, pickerel and bass. For the deepsea fishing enthusiast, fishing boats are available for charter.

With launching facilities present at many points, powerboating opportunities abound. The 65-mile-long Mactaquac Reservoir adds greatly to the available inland cruising waters and there are also many streams, lakes, and ponds suitable for canoeing. River mouths and bays of the sea provide sheltered, safe sailing areas.

Hunting highlights the autumn season in New Brunswick. Ruffed grouse, pheasant, ducks and geese are popular game birds hunted in New Brunswick. Sport hunting of such big game animals as moose, deer and bear is carried on in every part of the Province.

A quaint feature of the rural landscape in New Brunswick is the covered bridge, including the longest in the world, the 1,282 foot Hartland Bridge. Another quaint feature of the New Brunswick countryside is the government-operated cable ferries. Twelve such ferries operate at points along the Saint John River Valley, providing a cooling interlude during a scenic drive along the river.

A high point of any New Brunswick holiday is a visit to Fundy National Park, one of the most popular playgrounds in the Province's parks system. Here, sweeping in wide panorama from the coast, are eighty square miles of exclusive, spectacular vacationland, where there is something to appeal to everyone. The facilities include a magnificent outdoor warmed saltwater swimming pool, a golf course and deep forests, sheltered quite lakes and tumbling streams to invite the angler's challenge. Every kind of accommodation is available at the park, including distinctive French Chalet cottages, motels, picnic and camping sites.

During the winter the generous snowfall throughout the Province offers fine opportunities for skiing and associated winter activities with slopes of 1,500 feet and ideal snow conditions commonplace.

Over 90 per cent of the tourist travel in New Brunswick is now by automobile. The Province's highway system provides hard-surfaced roads to all major recreation areas, and gravel and secondary roads give access to many others.

RECREATIONAL RESOURCES
QUEBEC
MAINE
NOVA SCOTIA
PRINCE EDWARD ISLAND
DALHOUSIE
CAMPBELLTON
SHIPPEGAN
BATHURST
TRACADIE
Gloucester
Restigouche
ST. QUENTIN
Madawaska
EDMUNDSTON
ST. LEONARD
Victoria
GRAND FALLS
PLASTER ROCK
NEWCASTLE
CHATHAM
Northumberland
BUCTOUCHE
Kent
Carleton
HARTLAND
WOODSTOCK
York
FREDERICTON
ST. JOHN R.
Sunbury
CHIPMAN
MINTO
Queens
DROMOCTO
SUSSEX
Westmorland
SHEDIAC
MONCTON
DIEPPE
SACKVILLE
Albert
Kings
St. John
SAINT JOHN
Charlotte
ST. STEPHEN
MILLTOWN
ST. GEORGE
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
LEGEND
NATIONAL PARK (1000 ACRES AND OVER)
REGIONAL PARK
MAJOR PROVINCIAL PARK (1000 ACRES AND OVER)
GOLF COURSE
DEEP SEA CHARTER
BEACH SWIMMING AREA
MARINA
SKI AREA

EDUCATION

Post-Secondary Education

The University of New Brunswick with its main campus in Fredericton is a degree granting institution with a total enrolment of 4,100. A branch of this University is operated in Saint John which provides instruction in the arts and sciences for the first two years. A total of 470 students are enrolled at the Saint John Branch.

Saint Thomas University is located on the campus at the University of New Brunswick. This is a degree granting institution which majors in the field of liberal arts and has a total of 650 students.

Mount Allison University is located at Sackville, New Brunswick and majors in liberal arts and has a total enrolment of 1,300.

The University of Moncton with its main campus at Moncton is a French language degree granting institution and has a total enrolment of 1,000. There are a number of other colleges affiliated with the University of Moncton. These include the College of St. Joseph located on the campus of the University of Moncton with an enrolment of 400, College de Bathurst, located at Bathurst and College Jesus-Marie and College Maria Assumpta also located at Bathurst, with a combined enrolment of 470, and College St. Louis and College Maillet, located in Edmundston with a combined enrolment of 440.

Two teacher-training institutions are in operation in the Province and these institutions are operated by the Provincial government. One Teachers' College is located in Fredericton on the University of New Brunswick campus. Two programs are offered; a 2-year training program for elementary teachers and a 2-year program for secondary teachers. This institution is for the English speaking students and has an enrolment of approximately 800. Ecole Normale is located on the campus of the University of Moncton and offers the same type of program for French speaking students. This Institute began operation in September of 1968 and has an enrolment of approximately 400.

Technical and Trade Schools

There are two technical institutions in the province — one located at Moncton and one at Saint John. These are both operated by the New Brunswick government. These two institutions offer technical, trade and occupational training programs.

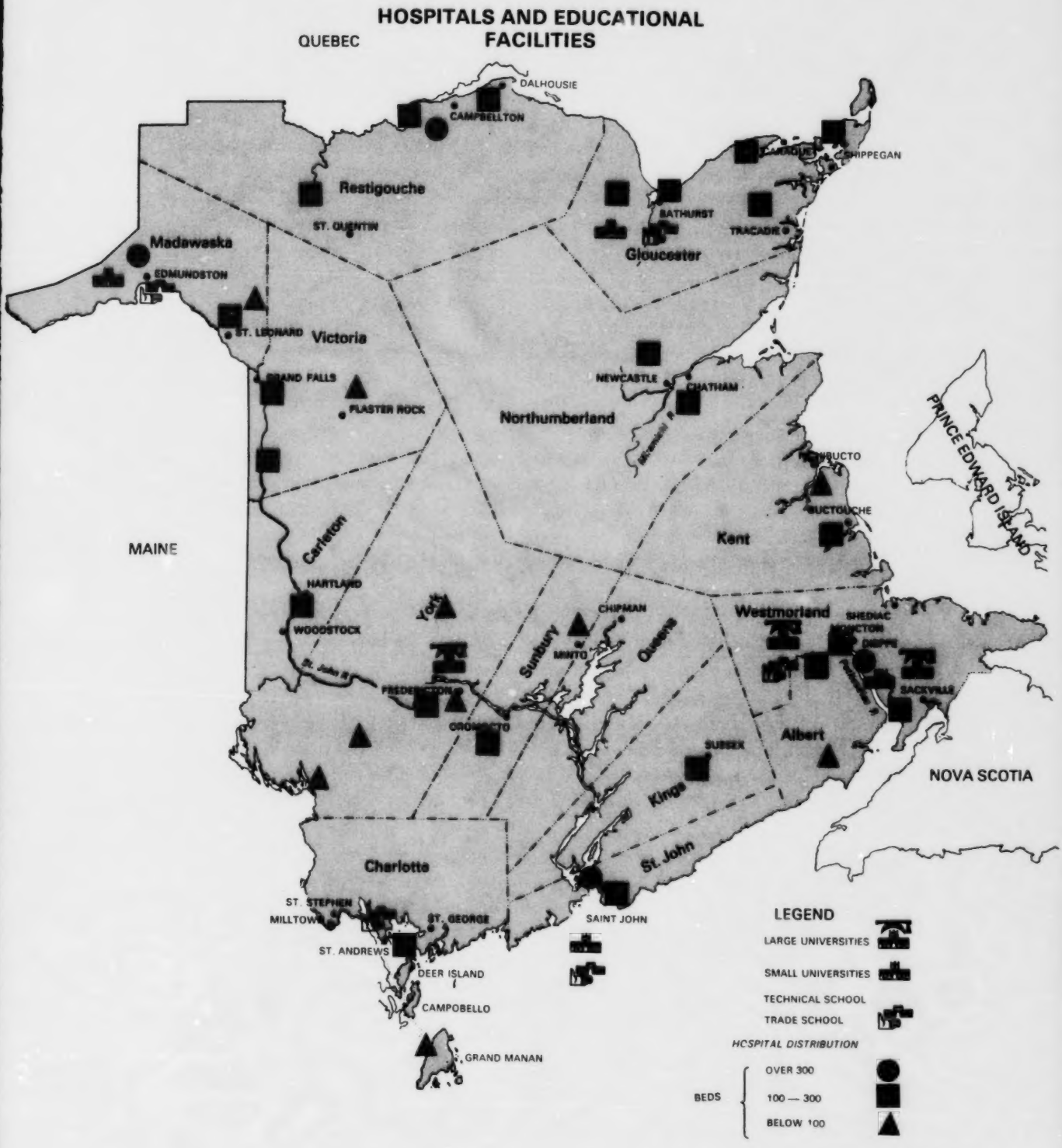
In addition to these two technical institutions, three trade schools are operated by the Province. These are located at Bathurst, Edmundston and St. Andrews. In these schools, trade and occupational courses are offered. The total training capacity of the Trade Schools and Institutes is approximately 2,900 for full time students. These facilities are also used for special classes depending on the demands of industry and labour.

Elementary and Secondary Schools

The Province's elementary and secondary schools are modern and well organized. Instruction is offered in two languages, English and French.

Public school education in New Brunswick has two primary purposes:

1. To provide educational opportunity for all educable children so that each may develop to the limit of his special capabilities.
2. To provide individual students with a basic education foundation in order that each may further pursue his training at institutions of higher learning or enter the labour force with a saleable skill.


HOSPITALS AND EDUCATIONAL FACILITIES
QUEBEC
MAINE
NOVA SCOTIA
PRINCE EDWARD ISLAND
DALHOUSIE
CAMPBELLTON
Restigouche
ST. QUENTIN
Madawaska
EDMUNDSTON
ST. LEONARD
Victoria
GRAND FALLS
PLASTER ROCK
Carleton
HARTLAND
WOODSTOCK
York
FREDERICTON
CROSS CREEK
Sunbury
CHIPMAN
MINTO
Queens
Charlotte
ST. STEPHEN
MILLTOWN
ST. GEORGE
ST. ANDREWS
DEER ISLAND
CAMPOBELLO
GRAND MANAN
SAINT JOHN
Kings
St. John
SUSSEX
Albert
Westmorland
SHEDIAC
MONCTON
SACKVILLE
Kent
BUCTOUCHE
RICHIBUCTO
Northumberland
NEWCASTLE
CHATHAM
Gloucester
BATHURST
TRACADIE
SHIPPEGAN
LEGEND
LARGE UNIVERSITIES
SMALL UNIVERSITIES
TECHNICAL SCHOOL
TRADE SCHOOL
HOSPITAL DISTRIBUTION
BEDS
OVER 300
100 — 300
BELOW 100

12 46

HEALTH AND SOCIAL SERVICES

Health and Social Services in New Brunswick are provided through agencies of the Provincial and Federal Governments and through voluntary associations, which, taken together, provide a broad range of services.

The Provincial Department of Health and Welfare provides a wide range of public health, diagnostic and treatment services for residents of the Province, both directly, and through independently operated hospitals. Hospital services are supplied to all residents in approved hospitals at standard ward care level, together with general out-patient services and laboratory services. Treatment for mental illness, alcoholism, tuberculosis and cancer is provided through provincially-operated clinics and institutions. Training and institutional care facilities are provided for mentally-retarded children and adults. A number of voluntary agencies, such as the Canadian Arthritis and Rheumatism Association, the Canadian Rehabilation Council for the Disabled, the Canadian Institute for the Blind and the Canadian Paraplegic Association provide special services for persons suffering from particular kinds of illnesses. Other voluntary agencies such as the Canadian Red Cross, the Victorian Order of Nurses and the St. John Ambulance Association supplement services otherwise provided.

The Provincial Department of Health and Welfare also administers programs to provide social assistance to persons in need and welfare services for children in cooperation with or in substitution for parents unable to provide the care required. Included is an adoption service. A number of Nursing Homes and Homes for the Aged are provided by Government. Voluntary associations provide special Family Services, supplementing those available from the Government Programs.

Children allowances are paid by the Federal Government to the mothers of all children from birth to the age of sixteen. In addition, there are Youth Allowances for persons aged sixteen to eighteen who are in full time attendence at school.

Unemployment Insurance is compulsory in Canada for all employees except public servants, and those who earn more than $7,800 per year. The contributions of each employee range from 10¢ per week to $1.40 per week, according to weekly earnings, with the employee's contribution being matched by that of the employer.

Employers are required by law to contribute to the Workmen's Compensation Board, but the employees are not required to pay a part of the cost. The rates payable vary as to employment hazards and are adjusted from time to time. The Workmen's Compensation Act provides compulsory collective liability, relieving employers of individual responsibility in accident cost. A workman to whom these provisions apply has no right of action against his employer for injury from an accident incurred in the course of employment.

There are a wide range of community services provided through voluntary organizations in each community. These include recreational and social programs for young and old, organized on a community basis.